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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/615,293

07/09/2003

Kazunori Komatsu

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01/11/2006

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EXAMINER

RICKMAN, HOLLY C

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/615,293

Applicant(s)

KOMATSU ET AL.

Examiner

Holly Rickman

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-14 and 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 7/9/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Art Unit: 1773

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Drawings

2. The drawings filed 7/9/03 have been reviewed by the Examiner and they are acceptable.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The rejection of claims 1-4 and 21-22 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement is withdrawn in view of Applicant's amendments.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. The rejection of claims 4 and 10 under 35 U.S.C. 112, second paragraph, is withdrawn in view of Applicant's amendments

Claim Interpretation

7. The recitation of “rectangular shape” protruding portions has been interpreted to mean that any surface of the protrusion is approximately rectangular in shape (i.e. top, side, bottom) or that the cross-section of the protrusion itself is rectangular. *If Applicant does not agree with this interpretation, it is requested that the claims be drafted to more particularly define the meaning of the term or alternatively, the definition of the term as set forth in the disclosure or prior art be referenced on the record.*

The recitations of “relatively straight” and “substantially rectangular” (e.g., claims 21-22) have been interpreted to mean that any portion of the protrusions noted above are either straight or fairly close to being straight and that the protrusions are either rectangular or close to being rectangular (i.e., side portions do not intersect at exactly 90 degrees). These are relative terms and therefore, there is a greater degree of latitude that must be given in interpreting these terms. In using this claim language, Applicant has made a distinction between the use of the term “straight” per se, which has the ordinary meaning of being free from curves, bends, irregularities, angles etc, and “substantially straight” which one must conclude can include any of these features within reason. That is to say, curves, irregularities etc can be present as long as one of ordinary skill in the art would view the feature in question as being close to straight.

Claim Rejections - 35 USC § 102/103

8. Claims 1-14 and 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative under 35 U.S.C. 103(a) as obvious over Ishida (WO98/03972). (US 6347016 is an English equivalent to W098/03972 and is used herein as an English translation of the WO

Art Unit: 1773

document. All references to Ishida refer to the US document. It is noted that W098/03972 was published on Jan 29, 1998.)

Claim 1 requires that “the width of each of said plurality of tracks is greater than the drawing diameter of the electron beam.” This limitation defines the track width of the product in terms of the process used to make said product. This limitation does not appear to be further limiting insofar as the *structure* of the product is concerned. It has been held that even though a product claim is limited by and defined by a process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). When there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

There is no evidence of record that establishes that a master medium produced using an electron beam having the claimed relationship to the track width is *structurally different* from that of a master medium produced by a different process using a different electron beam. The present specification describes that laser ablation/lithography results in the protrusion portions of the pattern having rounded edges, whereas the method of the instant invention does not. However, Applicant has provided no data that establishes that the claimed electron beam method limitations result in a master medium that is structurally different from a master media that is taught by Ishida.

Bearing the above in mind, Ishida teaches a magnetic master comprising a substrate with a patterned magnetic layer on its surface. The pattern is formed in the surface of the master via lithography with a laser or an electron beam. In one embodiment, the width of the protuberance portions of the patterned magnetic layer (known to be equivalent to the track width) are *0.2 microns* (see figure 10). It is noted that this track width is within the range disclosed by Applicant (see claim 5). Ishida teaches that the protuberances should have a rectangular cross section, as shown in Figure 3 (column 15, lines 59-67).

It is noted that Figure 1 of Ishida shows that the top surface of the surface protrusions are rectangular. In addition, the side portions shown in figure 10 read on the claim limitation directed to substantially straight end portions and do the top surface end portions of the rectangular surfaces of the protrusions shown in figure 1.

Response to Arguments

9. Applicant's arguments filed 10/19/05 have been fully considered but they are not persuasive.

Applicant argues that the Examiner has not given any patentable weight to the limitations defining track width in terms of the drawing diameter of the electron beam that is used to form the track width pattern and maintains that this position is technically inaccurate.

The examiner respectfully disagrees. All claim limitations have been considered insofar as they define the claimed product. In the special case of product-by-process claims, the examiner's burden is to consider the process limitations insofar as they impart *structural characteristics* to the final product. The examiner agrees with Applicant that it is entirely proper

Art Unit: 1773

to define a product in terms of the process by which it is made. However, it is the examiner's contention that once a prima facie case has been made that the prior art shows substantially the same structure as claimed, the burden is shifted to Applicant to show evidence that the claimed process limitations structurally distinguish the claimed invention over the prior art. The examiner contends that her burden of setting forth a prima facie case has been met. Thus, Applicant must provide *evidence* to rebut this prima facie case.

The examiner has fully considered Exhibit B showing burst pattern plots between "the conventional technique" and the "technique set forth in claim 1" as described by Applicant on page 11 of the response filed 10/19/05. Applicant maintains that the conventional technique produces a pattern having upper and lower portions that are arcuate whereas the pattern according to the invention of claim 1 is "substantially straight." It is not clear to the examiner that there is a patentable distinction between the "substantially straight" curve and the "arcuate" curve. They are both slightly curved on the upper and lower portions. The distinction appears to be one of the degree of curvature. A single example and comparative example are not sufficient to establish that this is a statistically significant or unexpected difference. In addition, it is not clear to the examiner that the evidence set forth in Exhibit B is commensurate in scope with the claims. The evidence does not include any description or comparison of the process parameters used in each example or of the product specifications used in each example.

Thus, the data set forth in exhibit B is insufficient to establish a patentable distinction between the product resulting from the "conventional technique" and the technique as set forth in claim 1.

Art Unit: 1773

A central issue in this case is what is meant by “rectangular shape.” As noted above, this limitation *does not limit the rectangular shape to the side profile or cross-sectional shape of the protrusion*. The examiner has interpreted the claim limitation directed to a “rectangular shape” as being broader than the art recognized meaning of the term “rectangle” (i.e., a “rectangle” is a parallelogram having all sides intersecting at 90 degree angles.” The claims directed to “substantially straight” end portions, “substantially rectangular” and the inventive structure shown in exhibit B all suggest that there is some latitude in the scope of “rectangular shape” and that the angles between intersecting sides do not have to be exactly 90 degrees. Thus, the examiner maintains for at least these reason that Ishida does not teach away from rectangular protrusions.

Applicant’s arguments regarding the obviousness statement set forth in relation to the 102/103 rejection of claims 1-14 and 21-22 (see paragraph 8 of the last Office action) is moot in view of the examiner’s withdrawal of this basis of argument.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 1773

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (571) 272-1514. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Holly Rickman
Primary Examiner
Art Unit 1773